

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Claims 1-20 were pending in this application. By this Amendment, claims 1, 4, 7, and 17 are amended to further recite the invention and address matters of form; claims 2, 5, 6, 8-16, and 18-20 are canceled; and claims 21 and 22 are added. No new matter has been added. For the reasons stated below, Applicant respectfully submits that all claims pending in this application are in condition for allowance.

In the Office Action mailed January 15, 2008, the drawings were objected to as not showing every feature of the invention specified in the claims; claim 3 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite; claims 1, 5-7, and 11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,847,720 to Tseng ("Tseng") in view of antiquemed.com/20th_century.htm ("Antique Med"); and claims 2-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tseng in view of Antique Med and further in view of U.S. Patent No. 3,621,206 to Scribner ("Scribner"). To the extent these rejections might still be applied to claims presently pending in this application, they are respectfully traversed.

With regard to the drawing objections, claims 5 and 11 have been canceled without prejudice to or disclaimer of the subject matter recited therein. Accordingly, the objection is moot and Applicant respectfully requests withdrawal of the objections.

With regard to the rejection under § 112, claim 3 has been amended to recite that "a fastening element is provided on one of said side surface of said personalizing-identifying ring" and is therefore respectfully submitted to be definite. New claim 21 has been added to recite that

said fastening element "is in the form of thread, catch or recess" to further recite the invention. Accordingly, reconsideration and withdrawal of the rejection under § 112 are respectfully requested.

With regard to the rejections under § 103, Applicant respectfully submits that the cited references do not disclose, teach, or suggest the amended claims, alone or in combination.

Tseng relates to a stethoscope head comprising a head body (6), to which a diaphragm portion (7) is removably attached. A lower end of the head body (6) has an axially extending shaft (61) formed with an annular trench (62) on its outer surface for receiving an elastic tightening ring (73) made of rubber. The diaphragm portion (7) can be detached from the head body by manually pulling away the diaphragm portion (7) from the head body (6). Reassembly of the stethoscope head can be carried out by manually pressing the diaphragm portion (7) onto the head body (6) with the elastic tightening ring (73) placed on its outer surface.

Additionally, the head body (6) is provided at its top with a cover (63), which has a depression (69), and a card (20) having identifying signs and covered with a film (21) is placed in the depression. The card and foil are fixed in the depression by pressing them both into the latter.

The identifying means used in the stethoscope head of Tseng comprise a card with a foil placed on the top cover of a stethoscope head. Thus, the stethoscope head has to be of a one-sided type, and no additional diaphragm portion can be placed on a top of the head body, for example, a diaphragm portion of a smaller size that is adapted for examination of infants or different regions of a human body than the lower and bigger diaphragm portion. The card and the foil used as an identifying means cannot be sterilized together with the remaining part of the stethoscope head, which may cause a risk of transfer of bacteria and micro-organisms between

particular patients when such a stethoscope head is used many times to examine different patients without changing the identifying means.

In the stethoscope head of Tseng, the orientation of the card with signs in respect to a head inlet pipe is an unimportant matter. Thus, there is no disclosure, teaching, or suggestion in Tseng as to which means may be used for fixing the orientation of the element with signs in relation to an inlet pipe axis.

By contrast, in the present invention a personalizing-identifying means comprises a personalizing-identifying ring having signs on its top. The ring is placed on the diaphragm portion, which can be a bigger one when the stethoscope head has two opposite diaphragm portions. Thus, there is no restriction on designing a stethoscope head comprising more than one diaphragm portions, as is the case with the device of Tseng.

Tseng discloses an elastic tightening ring for connecting a diaphragm portion with a diaphragm but does not disclose that such ring may be used for fixing and connecting a diaphragm portion, diaphragm, and the personalizing-identifying means in the form of a ring placed on a top of the diaphragm portion together at the same time, since Tseng does not disclose such a ring at all.

In the stethoscope head according to the present invention, the personalizing-identifying ring may always be oriented in the same precisely determined position in relation to the inlet pipe axis. As a result, the signs or other personalizing-identifying means placed on the ring are highly visible and are not covered by the inlet pipe extending from the head. Thus, they can be very readable and recognizable. A risk of making a mistake by using the same stethoscope for different patients is substantially prevented.

Such precise and repeatable orientation of the personalizing-identifying ring is achieved in the stethoscope head according to the present invention by providing the stethoscope head with two sets of locating-connecting means for assembling the diaphragm portion and the head body with the inlet pipe in a predetermined orientation with each other. Tseng does not disclose, teach, or suggest such a dual system for placing the personalizing-identifying means in a precise orientation in relation to the stethoscope head.

The reference Antique Med, and in particular the picture of a disassembled stethoscope head on page 5, likewise does not disclose, teach, or suggest a ring that is placed on a diaphragm portion of the stethoscope head and visible during use of the stethoscope and examination of the patient. The picture presents a cover in the form of a disk on which there are some signs and the cover is placed on a diaphragm of the stethoscope head from a bottom of the diaphragm portion. The cover has to be removed and put aside before the stethoscope is used. Thus, there is no possibility to check the signs of the stethoscope during an examination, which may cause the use of the wrong stethoscope for a particular patient. In such a stethoscope head, the angular orientation of the cover is coincidental, as there are no means for precise orientation of the cover. In Antique Med, there is also no disclosure, teaching, or suggestion that the diaphragm portion may be repeatedly dismantled and assembled, which a feature of the present invention.

Thus, Antique Med does not cure the deficiencies of Tseng and therefore, the claims are patentable over Tseng and Antique Med, alone or in combination.

The use of the personalizing-identifying ring serves to provide the clear distinction of the stethoscope and assignment of the instrument to only one person at a particular time to avoid the risk of infection for that person.

With regard to Scribner, Applicant respectfully notes that Scribner relates to a system for reading data and placing a label in one line with a reading device. Thus, Scribner concerns two different elements, which are to be located in line with each other.

Unlike Scribner, in the present invention three different elements, including the personalizing-identifying ring, the diaphragm portion, and the head body, are oriented with respect to each other and, importantly, the personalizing-identifying ring is located in proper orientation with respect to the inlet pipe attached to the head body. Scribner does not disclose, teach, or suggest means for placing three elements such that first of them has the determined orientation with respect to the third of them, as is claimed.

Moreover, the technical field of Scribner is remote from the technical field of the present invention and no person skilled in the field of stethoscopes would look for teachings in documents of the technical fields of Scribner.

The present invention provides a stethoscope head which is more useful. In addition to the above-discussed ability of precise distinction of the stethoscope, the present invention facilitates the easy and simple dismantling of the stethoscope head, the sterilization of all components of the stethoscope head (including the personalizing-identifying ring), and the reassembling of the device with a simple tool, such as a small screwdriver. Additionally, the personalizing-identifying ring may be replaced, if necessary.

It is noted that a stethoscope, being the main instrument of physicians and nurses, allow them to make a correct diagnosis, which has direct influence on the health and life of patients. Quality of a stethoscope construction and materials used for the instrument heavily influence the transmission of an acoustic signal and reception thereof by a user. Moreover, nowadays, in view of the increasing danger of infections in hospitals and the spreading of different illness, the

assignment of one stethoscope to a particular patient and/or to a particular physician with the ability to be more careful, and for deep sterilization of all parts of the stethoscope head, are extremely important. The features mentioned above, in combination with the other features in the claims, represent the novelty and non-obviousness of a stethoscope head according to the present invention. A user can replace the personalizing-identifying ring himself at any time. The personalizing-identifying ring may be made of any material, preferably stainless steel, which may be subjected to sterilization. The personalizing-identifying ring may be used in a stethoscope head of different types (*e.g.*, either one-sided or two-sided) without unfavorably affecting signal transmission.

By contrast with the above, in the stethoscope heads of the cited references, the transmission of signals is deteriorated because of the use of disposable plastic diaphragm portions. In addition, the sterilization of all components of the stethoscope head is not possible after disassembly thereof. Also, engraved signs in steel elements of stethoscope heads cannot be changed easily and quickly.

It should be taken into consideration that, according to the present invention, the providing of the connection elements in the form of screws, pins, and bolts between the diaphragm portion and head body, enables the disassembly of the whole stethoscope head, further sterilization of all parts thereof, and easy reassembly by a user himself, obtaining the same location of all elements in respect to each other. Owing to the fact that the reassembled stethoscope head is characterized by an airtight fit and a good transmission of signal, the instrument is made highly reliable. Using the connecting elements of such type in the stethoscope head according to the present invention makes it possible to design all elements of stainless steel, which is the best material with regard to acoustic and medical properties.

Unlike the present invention, the diaphragm portions in the cited references, wherein the diaphragm portion is screwed on a head body or pressed on or into a head body, do not ensure the ability to repeatedly locate the head body and diaphragm portion with respect to each other and do not provide a proper position of stethoscope channels with respect to the diaphragm portion. Additionally, as material of both of the connecting parts of the above type becomes worn during repeated connecting and disconnecting, lack of tightness may occur in the construction of the whole stethoscope head, and in such a case the whole stethoscope head has to be replaced.

In view of the foregoing, all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone Applicant's undersigned representative at the number listed below.


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